Center for Information Management

Managing Data for a Corporate Perspective

25 August 1992

Agenda

- **The DoD Problem**

- **Corporate Information Management Process Support**

- **What is Different Now?**

- **DoD Data Administration Framework**

- **Elements of the DoD Data Administration Program**

- **Baseline and Direction of Data Standardization in DoD**

- **Future of DoD Administration**

The DoD Problem

- **Uncertain Threat Environment**
- **Reduced Force Structures and Budgets**
- **Outdated Business Methods and C3I Processes**
- **Obsolete/Redundant Information Systems**

DoD IM / IT Culture Change

- Process First / Technology Second

- Provide More "Purple" Support

- Increase Centralized Support of Information Management (IM) / Information Technology (IT)
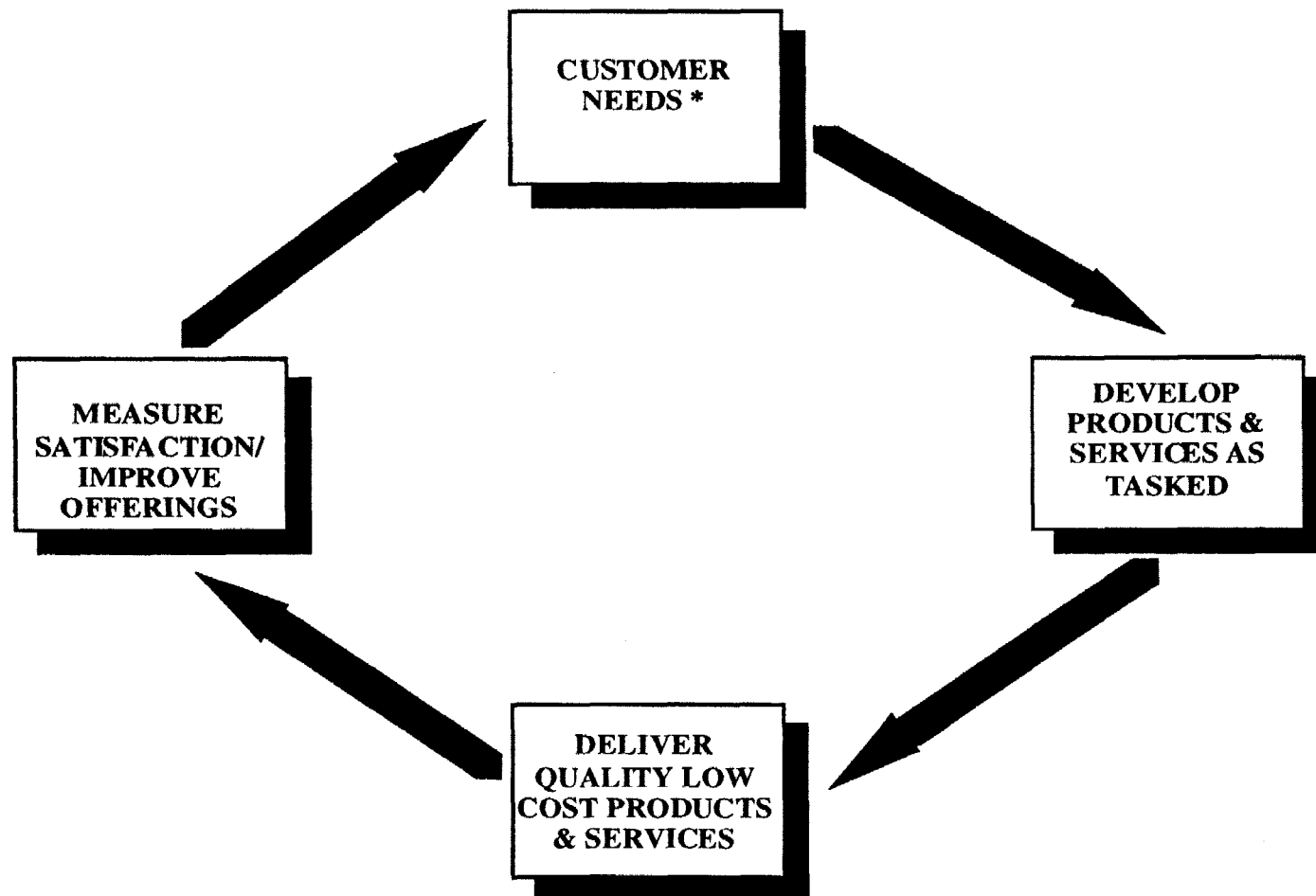
- Move to Customer-Provider, Fee-Based Paradigm

Center for Information Management

- Agent for Change
- Information Technology Service Provider
- Technical Integrator

Center Approach

CUSTOMER
NEEDS *

DEVELOP
PRODUCTS &
SERVICES AS
TASKED

DELIVER
QUALITY LOW
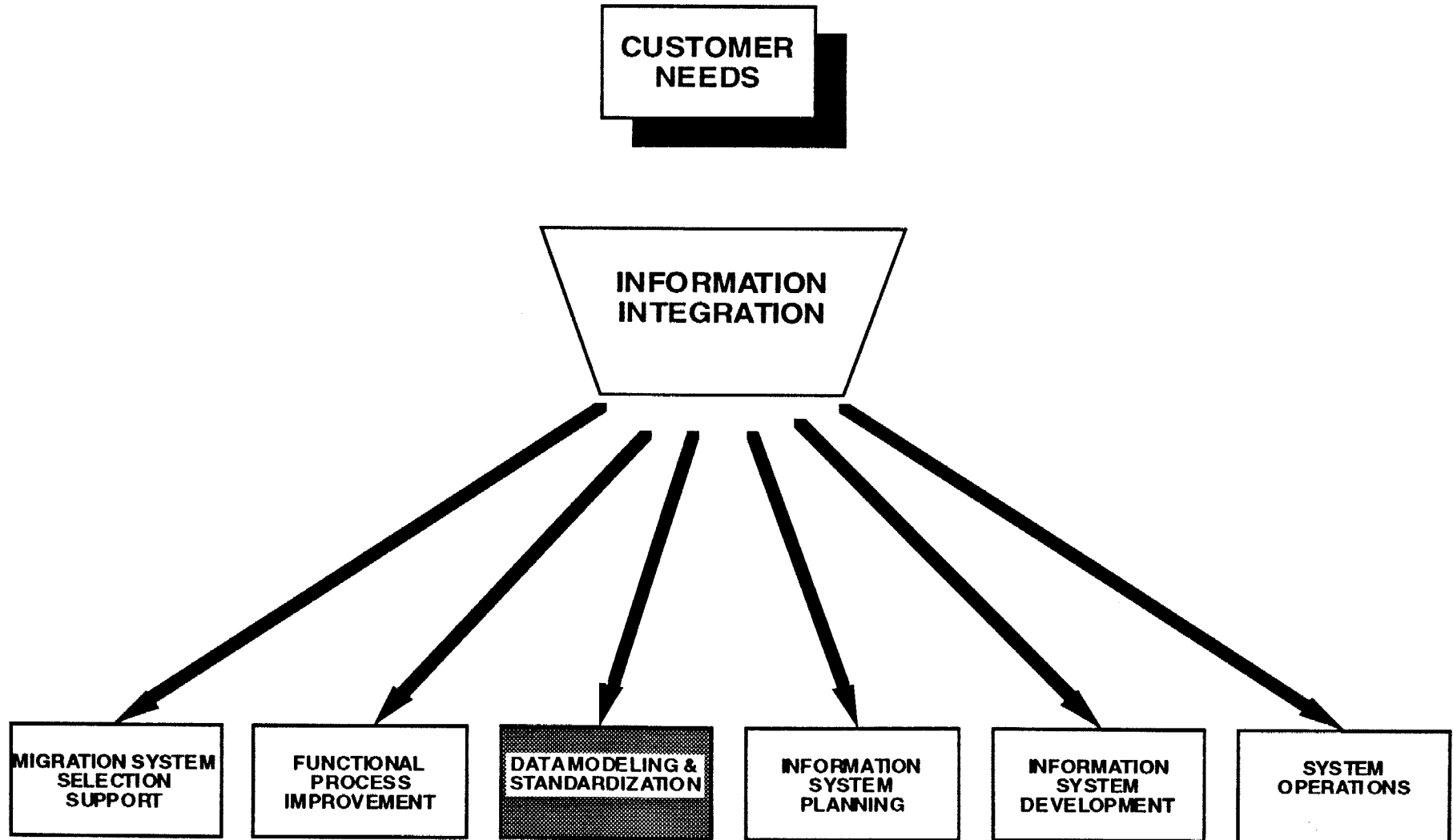COST PRODUCTS
& SERVICES

MEASURE
SATISFACTION/
IMPROVE
OFFERINGS

* The corporate Information Management process defines the customer's immediate need for technical tools, services and assistance.

Corporate Information Management Process Support

CUSTOMER NEEDS

INFORMATION INTEGRATION

| MIGRATION SYSTEM SELECTION SUPPORT | FUNCTIONAL PROCESS IMPROVEMENT | DATA MODELING & STANDARDIZATION | INFORMATION SYSTEM PLANNING | INFORMATION SYSTEM DEVELOPMENT | SYSTEM OPERATIONS |

Data Modeling and Standardization

Corporate Information Management Process ➡ **Center Support**

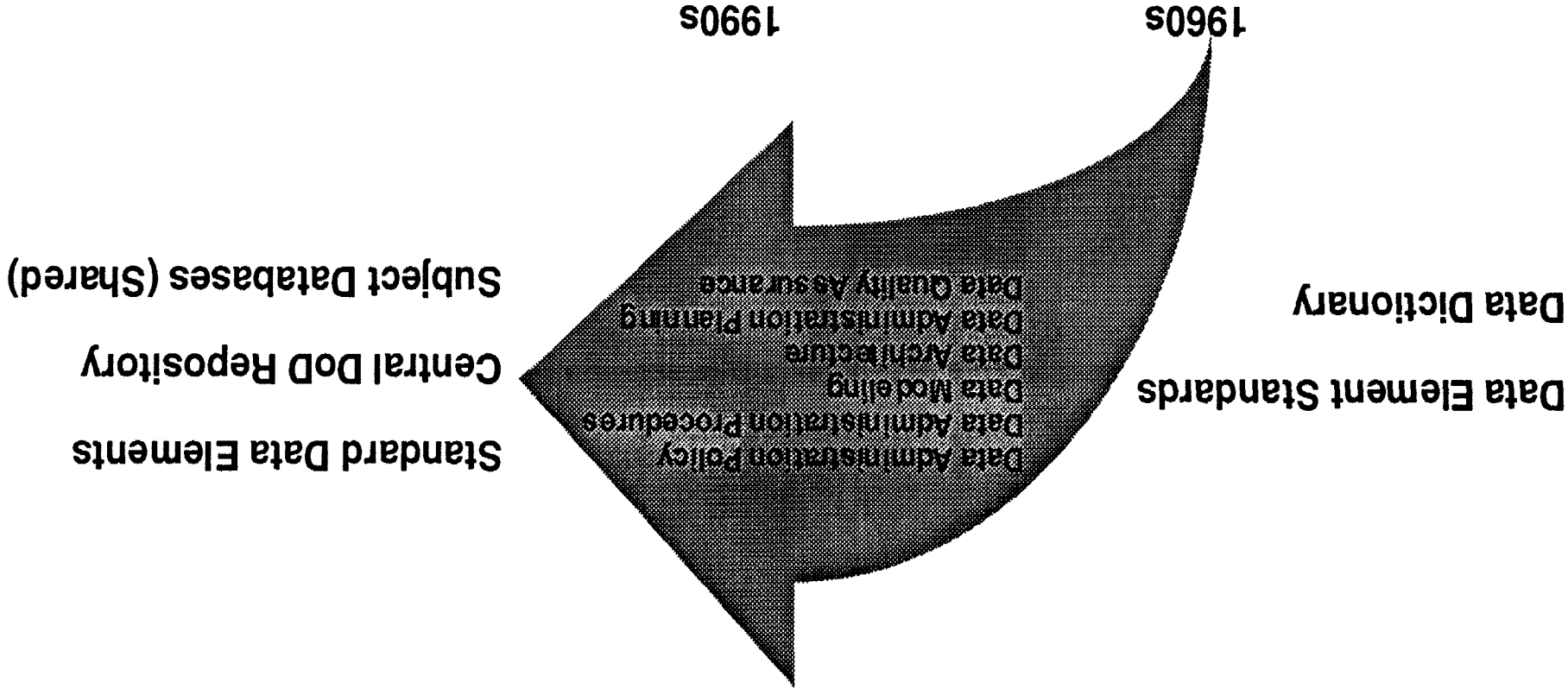| Model processes	→	Model data	→	Identify standard data	→	Data Management Plan
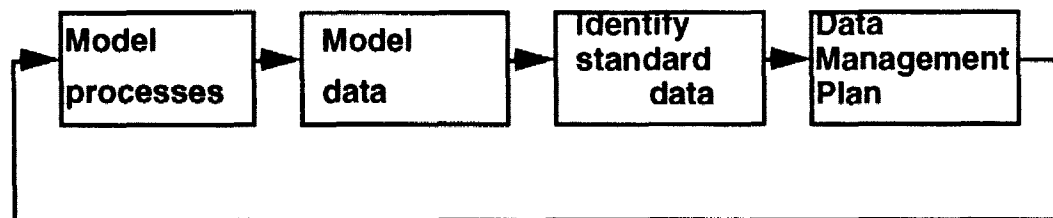
Iterate

- **Data Models for Improved Processes**
- **Standard Data Leading to DoD-wide Shared Information**

- **Data Model Tools through I-CASE RFP**
- **DoD Data Administration Program**
    - **Functionally Oriented Procedures**
    - **Flexibility**
- **DoD Data Dictionary**
- **DoD Data Model and Architecture - Subject Databases**
- **Expert Technical Assistance**

What Is Different Now?

1960s
- Data Dictionary
- Data Element Standards

1990s
- Data Administration Policy
- Data Administration Procedures
- Data Modeling
- Data Architecture
- Data Administration Planning
- Data Quality Assurance
- Standard Data Elements
- Central DoD Repository
- Subject Databases (Shared)

DoD Data Evolution

| CATEGORY	THEN	NOW	ACTION(s)
DA Policy	Service/Agency	DoD	• DODD 8320.1, 9/26/91 • Top Management Support
DA Procedures	Service/Agency	DoD	• DoD 8320.1-M (Draft) - ConOps - Procedures -- Program Administration -- Technical Infrastructure -- Operational Services - Glossary
Data Standards	DoD	DoD	• DoD 8320.1-M-1 (Draft) for Model-Based Standard Data Elements • Legacy Data Elements for Analysis

DoD Data Evolution (Continued)

CATEGORY	THEN	NOW	ACTION(s)
Data Dictionary	DoD	DoD	• DDRS IOC 8/92 • Migrate Repository to Open Systems • Expedite Population
Data Modeling	Service/Agency	DoD	• DoD Data Model and Architecture • IDEF1X
DA Planning	Service/Agency	DoD	• DA Strategic Plan (Annual) • DA Implementation Plans
Data Quality Assurance	Service/Agency	DoD	• Revisions to AIS Life Cycle/MAISRC Review • Guidance in DoD 8320.1-M

DoD Data Administration Framework
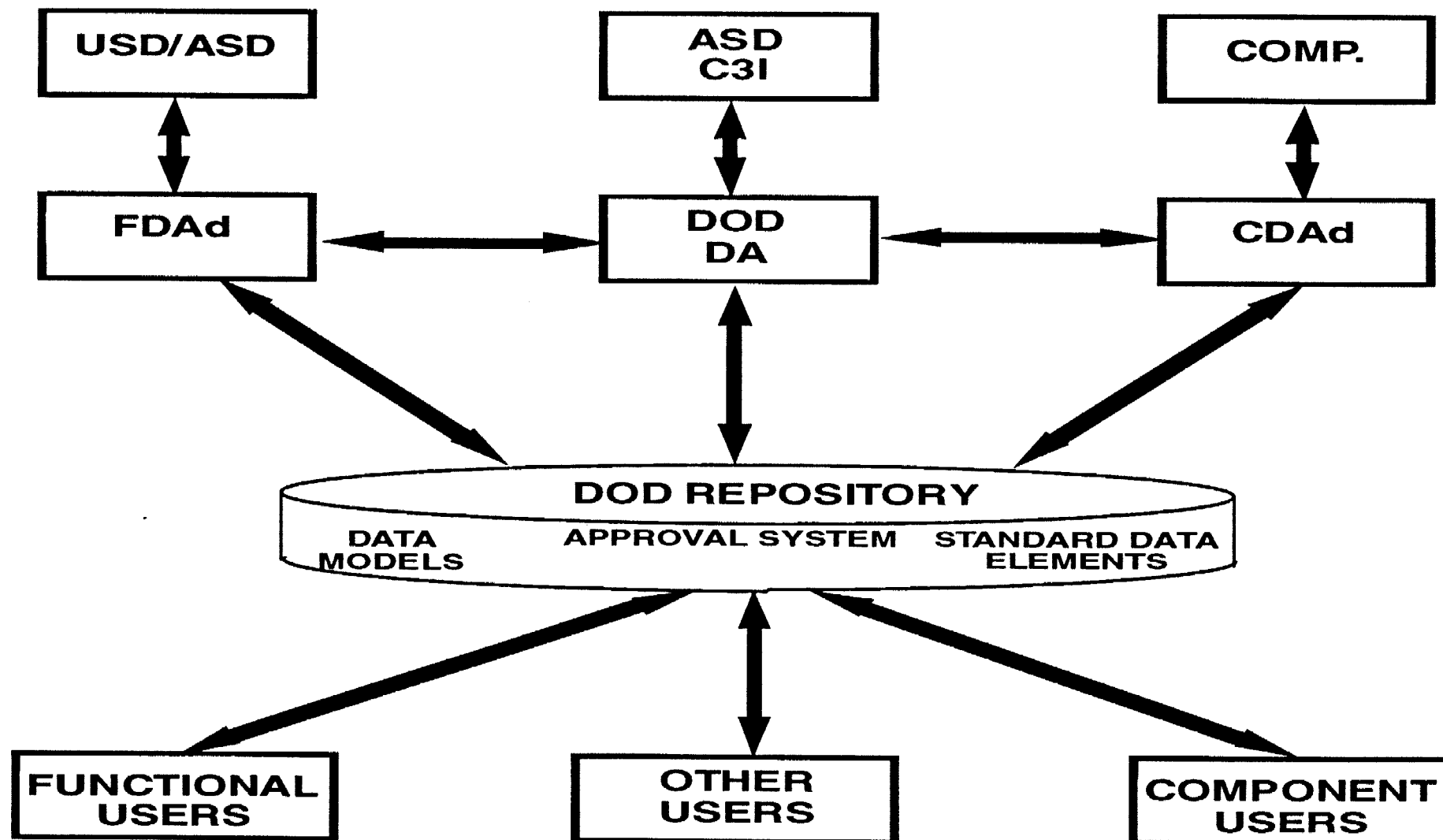
Elements of the DoD Data Administration Program
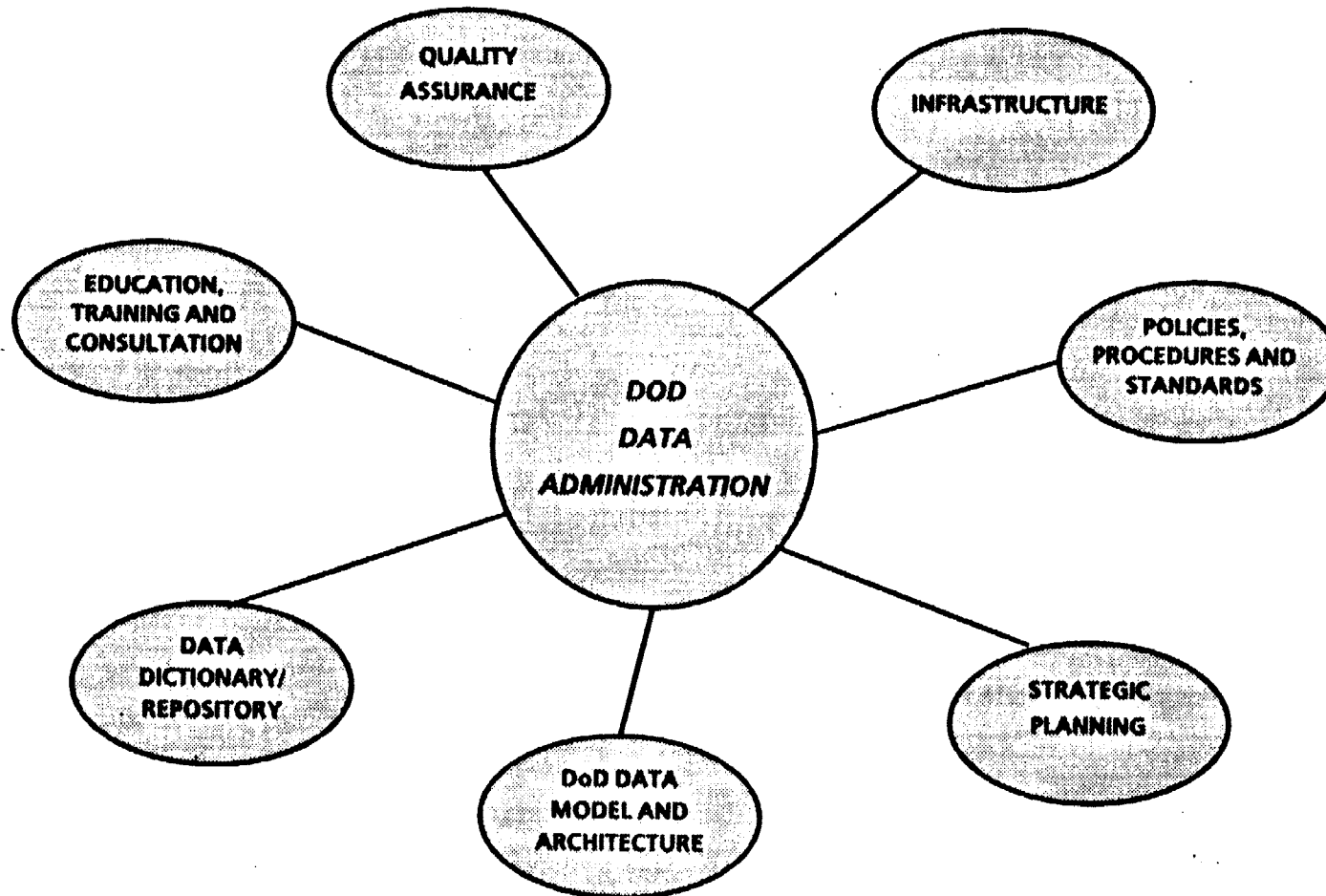
Infrastructure
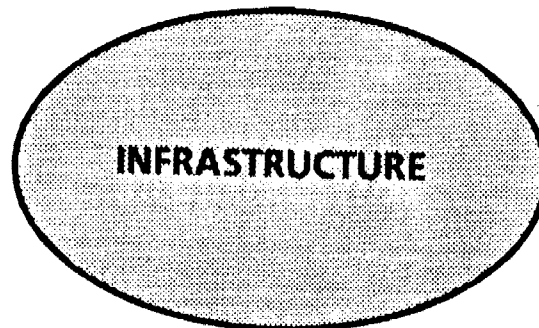
INFRASTRUCTURE

ORGANIZATIONAL STRUCTURE

- ESTABLISHED UNDER DODD 8320.1
- DOD DATA ADMINISTRATION FRAMEWORK
- INSTITUTIONALIZED WITH DOD DATA
  ADMINISTRATION STRATEGIC PLAN

DOD DATA ADMINISTRATION COUNCIL

- CHARTERED AND CHAIRED BY CIM
- FDA/CDA REPRESENTATIVES DESIGNATED
- CONVENED JANUARY 1992
- ESTABLISHED AS ISSUE AND EXCHANGE FORUM
- PROVISION FOR SUBGROUPS

Policies, Procedures and Standards

POLICIES, PROCEDURES AND STANDARDS

<u>DODD 8320.1</u>

<u>DOD DATA ADMINISTRATION</u>

- *ISSUED SEPTEMBER 26, 1991*
- *ESTABLISHES POLICIES*
- *ASSIGNS RESPONSIBILITIES*
- *AUTHORIZES PROCEDURES MANUAL*
- *AUTHORIZES DOD IRDS*

<u>DODD 8320.1-M</u>

<u>DOD DATA ADMINISTRATION PROCEDURES MANUAL</u>

- *INTRODUCTION*
- *ROLES AND RESPONSIBILITIES*
- *PROCEDURES FOR:*
  - *PROGRAM ADMINISTRATION*
  - *TECHNICAL INFRASTRUCTURE*
  - *OPERATIONAL SERVICES*
- *GLOSSARY*
- *CONCEPT OF OPERATIONS*

<u>DODD 8320.1-M-1</u>

<u>DOD STANDARD DATA ELEMENT DEVELOPMENT, APROVAL</u>

<u>AND MAINTENANCE PROCEDURES</u>

- *MAY 1992 DRAFT IN FORMAL REVIEW*
- *EMPHASIS ON DATA RE-DESIGN*
- *JOINT SERVICEIAGENCY WORKGROUP*

Strategic Planning

STRATEGIC PLANNING

DATA ADMINISTRATION STRATEGIC PLAN
- GUIDING PRINCIPLES AND DOCTRINE
- STRATEGIC DIRECTION
  - DATA DICTIONARYIREPOSITORY
  - DATA ARCHITECTURE
  - LEGACY SYSTEMS MIGRATION
  - EDUCATION AND TRAINING, ETC.
- RESOURCE REQUIREMENTS (POM)
- PROGRAM ASSESSMENTS
- FDAdICDAd DA IMPLEMENTATION PLAN
  - ESTABLISH DATA BASELINE
  - PRELIMINARY DASP INPUT

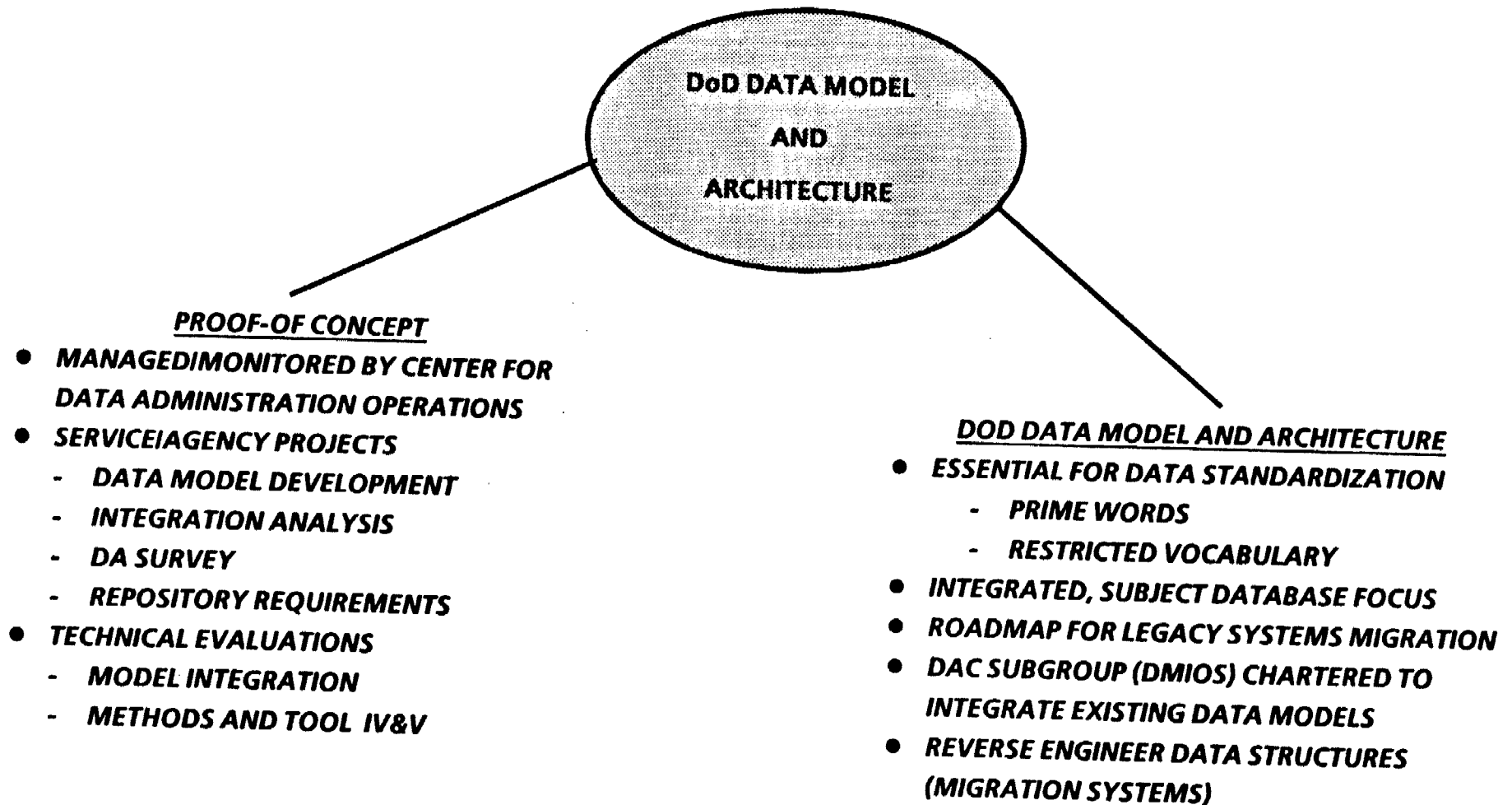**DOD DATA ADMINISTRATION IMPLEMENTATION PLAN**
- DEVELOPED BY ARMY EA UNDER "QUICK START"
- UPDATED TO REFLECT PROGRESS
- INCORPORATION INTO DA STRATEGIC PLAN

DoD Data Model and Architecture

DoD DATA MODEL AND ARCHITECTURE

PROOF-OF CONCEPT

- MANAGED/MONITORED BY CENTER FOR DATA ADMINISTRATION OPERATIONS
- SERVICE/AGENCY PROJECTS
  - DATA MODEL DEVELOPMENT
  - INTEGRATION ANALYSIS
  - DA SURVEY
  - REPOSITORY REQUIREMENTS
- TECHNICAL EVALUATIONS
  - MODEL INTEGRATION
  - METHODS AND TOOL IV&V

DOD DATA MODEL AND ARCHITECTURE

- ESSENTIAL FOR DATA STANDARDIZATION
  - PRIME WORDS
  - RESTRICTED VOCABULARY
- INTEGRATED, SUBJECT DATABASE FOCUS
- ROADMAP FOR LEGACY SYSTEMS MIGRATION
- DAC SUBGROUP (DMIOS) CHARTERED TO INTEGRATE EXISTING DATA MODELS
- REVERSE ENGINEER DATA STRUCTURES (MIGRATION SYSTEMS)

Data Dictionary/Repository

DOD DATA DICTIONARY/ REPOSITORY

I-CASE PARTICIPATION

- REPOSITORY REQUIREMENTS
- COORDINATE DA INPUT TO RFI/RFP

DEFENSE DATA REPOSITORY SYSTEM (DDRS)

- USERS MANUAL
- ACCESS PROCEDURES
- APPROVAL PROCESS
- FUNCTIONAL REQUIREMENTS DEFINITION
- MOVE TO OPEN SYSTEMS ENVIRONMENT

Education, Training, and Consultation

EDUCATION, TRAINING AND CONSULTATION

EXECUTIVE AND MANAGEMENT-LEVEL SEMINARS
- INCREASE AWARENESS FOR DA
- PROVIDE SUPPORT INFORMATION

COMPUTER-BASED TRAINING
- DATA ELEMENT STANDARDIZATION
- DATA DICTIONARY ACCESS
- PROVIDE JIT, INTERACTIVE, MODULAR AVAILABILITY

CLASSROOM TRAINING MODULES
- POLICY, PROCEDURES AND STANDARDS
- DATA ELEMENT STANDARDIZATION
- GENERAL CONCEPTS OF DA
- MODELING
- DATA DICTIONARY ACCESS

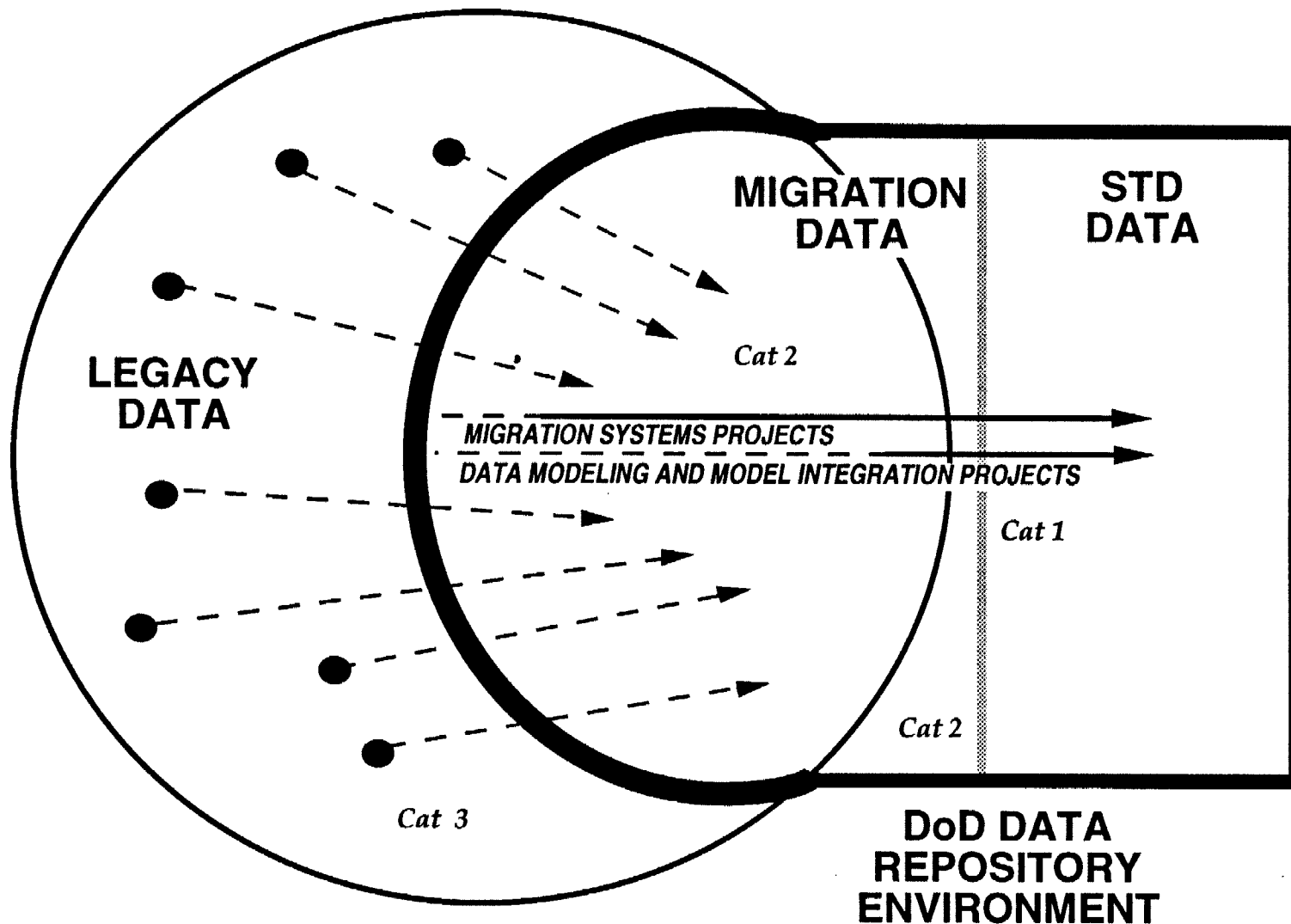# Quality Assurance

QUALITY ASSURANCE

ASSESSMENTS

- *DA PROGRAM ASSESSMENTS (DASP MEASUREMENTS)*
- *DDRS QUALITY CONTROL OF STANDARD DATA*
- *DATA MODEL TRANSFORMATIONS (LOGICAL TO PHYSICAL INTEGRITY)*

GUIDELINES

- *DATA INTEGRITY*
- *DATABASE SYNCHRONIZATION*
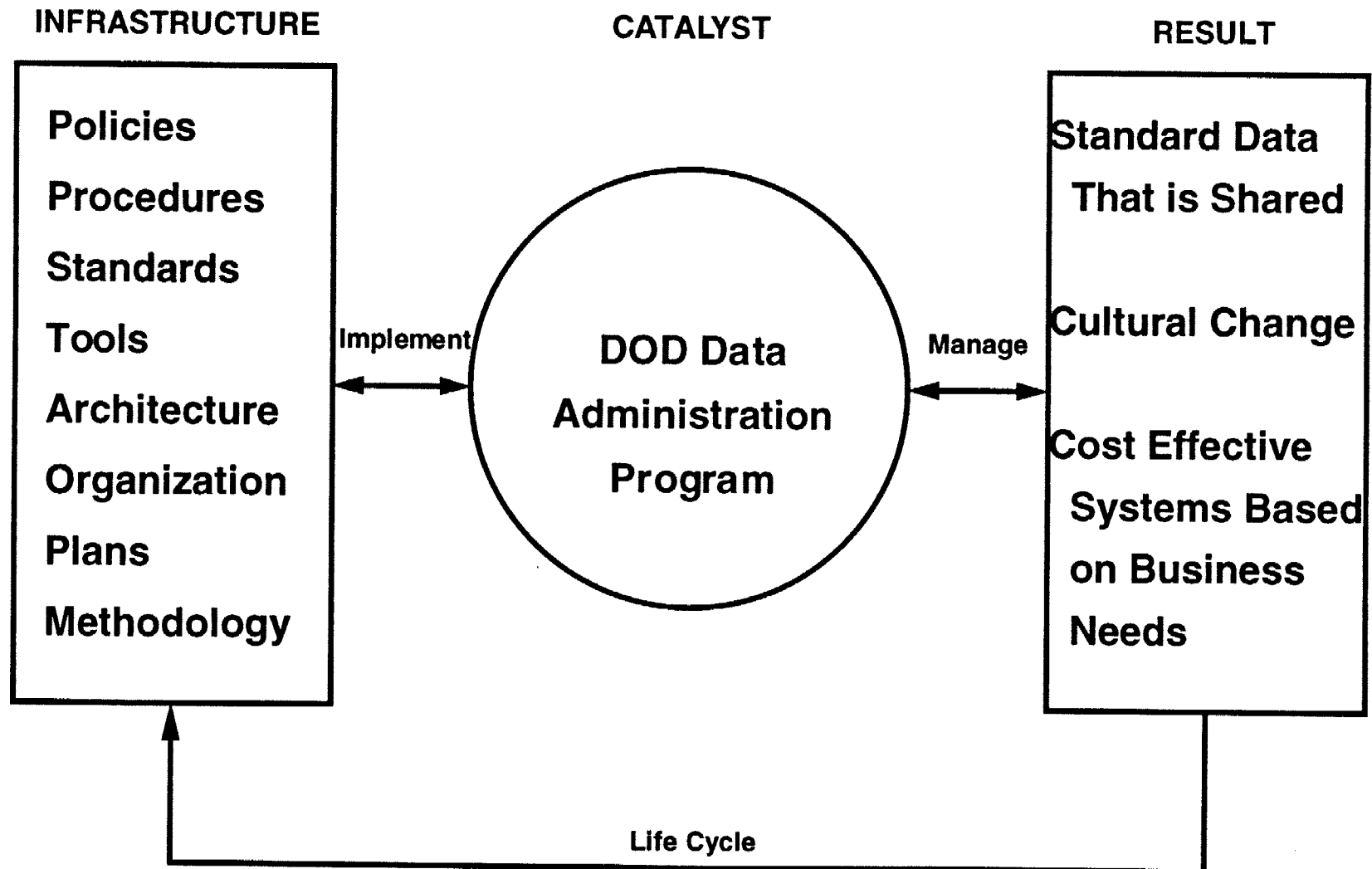- *DATA SECURITY*
- *LIFE CYCLE MANAGEMENT CHECKPOINTS*

Baseline and Direction of Data Standardization in DoD
(Including Current Data Repository Efforts)

LEGACY DATA

MIGRATION DATA

STD DATA

Cat 2

MIGRATION SYSTEMS PROJECTS

DATA MODELING AND MODEL INTEGRATION PROJECTS

Cat 1

Cat 2

Cat 3

DoD DATA REPOSITORY ENVIRONMENT

Future of DoD Data Administration

INFRASTRUCTURE

CATALYST

RESULT

Policies		Standard Data
Procedures		That is Shared
Standards		

DOD Data Administration Program

Implement ⟷ ⟷ Manage

Tools — Cultural Change

Architecture

Organization — Cost Effective

Plans — Systems Based

Methodology — on Business

Needs

Life Cycle

Summary

The Center for Information Management's Data Administration Role is to:

- **Promote the Management of Information as a Resource in DoD**

- **Promote the Efficient Use and Access to Information**

Background Material

Roles & Responsibilities

- USD/ASD

- ASD C3I

- Component

- DoD DA

- FDAd

- CDAd

USD/ASD Roles & Responsibilities

- Set Functional Policy

- Integrate within Function

- Designate FDAd

- Plan and Provide DA Resources

- Manage IAW DoD DA Policy

ASD C3I Roles & Responsibilities

- **Set DoD DA Policy**

- **Integrate across Functions**

- **Resolve Data Issues**

- **Review/Approve DoD DA Plan**

- **Designate DoD DA**

Component Roles & Responsibilities

- Manage IAW DoD DA Policy
- Integrate within Component
- Designate CDAd
- Plan and Provide DA Resources

DoD DA Roles & Responsibilities

- Manage DoD DA Program
- Consolidate and Submit DoD DA Plan
- Chair the DA Council
- Coordinate Data Issues for Resolution
- Publish DA Procedures and Standards
- Develop/Maintain Overall DoD Data Architecture
- Approve Data Elements as DoD Standard
- Maintain DoD Repository

FDAd Roles & Responsibilities

- **Develop Designated Functional Data Models**
- **Submits Recommendation for Approval/Disapproval for Candidate Data Elements to DoD Data Administration**
- **Submits Candidate Data Elements for Approval Processing**
- **Representative to DA Council**
- **Develop DA Plan for Functional Area**
- **Ensure Data Standards Compliance**

CDAd Roles & Responsibilities

- Technical Review of Data Elements for Functional Approval
- Submits Candidate Data Elements for Approval Processing
- Representative to DA Council
- Support Functional Requirements
- Develop DA Plan for Component
- Ensure Data Standards Compliance